

## A ROAD STATE CLIMATOLOGY FROM THE GLOBAL WEATHER CORPORATION ROAD WEATHER FORECASTS

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Global Weather Corp (GWC) produces high spatial and temporal resolution road weather forecasts (referred to by the product name RoadWX), across North America, Europe, and Asia. The RoadWX forecasts combine GWC's industry leading atmospheric forecasts with our road physics models to compute road surface temperature and road state, which represent critical information for road maintenance, vehicle safety, and navigation applications.

GWC has archived RoadWX forecast data across the United States and Europe for over one year. From this archive, analyses of the monthly, seasonal, and annual tendencies of road state can be determined, as well as the relationships between different atmospheric and road parameters. Example analyses include an estimate of how often roads are: a) dry, wet, slushy, or ice/snow covered; b) contain significant amounts of water or snow/ice; c) or are in a state where the predominant precipitation type does not match the road state (i.e., snow falling onto a comparatively warm road and melting, or snow falling onto a road that would induce melting when chemically treated). The primary goal of this study is to better understand and quantify the typical occurrence of different road characteristics at all locations across Europe. Additional insight into the road state evolution and interactions between atmospheric conditions and the road surface are provided as well.